

## Claims

1. A method for acknowledging reception of a packet of data in a  
2 communication system, comprising:

receiving, at a serving base, a message on an acknowledgement channel

4 for indicating said reception of said packet of data at a mobile station;

determining an erasure of said message at said serving base station;

6 receiving said message at a non-serving base station on said  
acknowledgement channel from said mobile station;

8 determining a value of said message at said non-serving base station;

10 communicating said value of said message from said non-serving base  
station to said serving base station; and

12 changing, at said serving base station, said erasure to said value of said  
message.

2. The method as recited in claim 1 wherein said value is a positive  
2 acknowledgment of said message.

3. The method as recited in claim 2 further comprising:

2 terminating a transmission of a remainder of data units of said packet of  
data to said mobile station from said serving base station after receiving said  
4 positive acknowledgment from said non-serving base station.

4. The method as recited in claim 1 wherein said value is a negative  
2 acknowledgment of said message.

5. The method as recited in claim 4 further comprising:

2 scheduling transmission of a next data unit in a remainder of data units of  
said packet of data to said mobile station from said serving base station after  
4 receiving said negative acknowledgement from said non-serving base station.

6. The method as recited in claim 1 wherein said mobile station is in a soft  
2 handoff condition with said serving and non-serving base stations.

7. The method as recited in claim 1 further comprising:

2 determining a signal voltage of said received message on said  
acknowledgment channel at said serving base station;

4 comparing said determined signal voltage to a positive modulation voltage  
threshold and a negative modulation voltage threshold; and

6 wherein said determining said erasure is due to having said determined  
modulation voltage between said positive and negative modulation voltage  
8 thresholds.

8. The method as recited in claim 1 further comprising:

2 determining signal voltage of said received message on said  
acknowledgment channel at said non-serving base station;

- 4 comparing said determined signal voltage to a positive modulation voltage  
threshold and a negative modulation voltage threshold; and  
6 determining said value of said message based on said comparing.

9. The method as recited in claim 1 wherein said serving and non-serving  
2 base stations are in an active set of base stations in said mobile station.

10. The method as recited in claim 1 further comprising:  
2 determining a reverse link quality with said mobile station at said non-  
serving base station;  
4 determining a reverse link quality with said mobile station at said serving  
base station;  
6 comparing said reverse link quality at said non-serving base station to said  
reverse link quality at said serving base station; and  
8 wherein said changing said erasure at said serving base station is based  
on whether said reverse link quality at said non-serving base station is better  
10 than said reverse link quality at said serving base station.

11. In a communication system, an apparatus for acknowledging reception of  
2 a packet of data, comprising:  
a serving base station receiver, in a serving base station, for decoding a  
4 message on an acknowledgement channel for indicating said reception of said

packet of data at a mobile station and determining an erasure of said message at

6 said serving base station;

a non-serving base station receiver, in a non-serving base station, for  
8 decoding said message on said acknowledgement channel from said mobile  
station and determining a value of said message at said non-serving base

10 station;

a communication system back-haul for communicating said value of said  
12 message from said non-serving base station to said serving base station; and

a serving base station controller, in said serving base station, for changing  
14 said erasure to said value of said message.

12. The apparatus as recited in claim 11, wherein said value is a positive  
2 acknowledgment of said message, said serving base station controller is  
configured for terminating a transmission of a remainder of data units of said  
4 packet of data to said mobile station from said serving base station after  
receiving said positive acknowledgment from said non-serving base station.

13. The apparatus as recited in claim 11, wherein said value is a negative  
2 acknowledgment of said message, said serving base station controller is  
configured for scheduling transmission of a next data unit in a remainder of data  
4 units of said packet of data to said mobile station from said serving base station  
after receiving said negative acknowledgement from said non-serving base  
6 station.

14. The apparatus as recited in claim 11 wherein said mobile station is in a  
2 soft handoff condition with said serving and non-serving base stations.

15. The apparatus as recited in claim 11 wherein said serving base station  
2 receiver is configured for determining a signal voltage of said received message  
on said acknowledgment channel at said serving base station, and comparing  
4 said determined signal voltage to a positive modulation voltage threshold and a  
negative modulation voltage threshold, wherein said determining said erasure is  
6 due to having said determined modulation voltage between said positive and  
negative modulation voltage thresholds.

16. The apparatus as recited in claim 11 wherein said non-serving base  
2 station receiver is configured for determining signal voltage of said received  
message on said acknowledgment channel at said non-serving base station,  
4 comparing said determined signal voltage to a positive modulation voltage  
threshold and a negative modulation voltage threshold, and determining said  
6 value of said message based on said comparing.

17. The apparatus as recited in claim 11 wherein said serving and non-serving  
2 base stations are in an active set of base stations in said mobile station.

18. An apparatus for acknowledging reception of a packet of data in a  
2 communication system, comprising:

means for receiving, at a serving base, a message on an  
4 acknowledgement channel for indicating said reception of said packet of data at  
a mobile station;

6 means for determining an erasure of said message at said serving base  
station;

8 means for receiving said message at a non-serving base station on said  
acknowledgement channel from said mobile station;

10 means for determining a value of said message at said non-serving base  
station;

12 means for communicating said value of said message from said non-  
serving base station to said serving base station; and

14 means for changing, at said serving base station, said erasure to said  
value of said message.

19. The apparatus as recited in claim 18 further comprising:

2 means for terminating a transmission of a remainder of data units of said  
packet of data to said mobile station from said serving base station after  
4 receiving said value as a positive acknowledgment from said non-serving base  
station.

20. The apparatus as recited in claim 18 further comprising:

2 means for scheduling transmission of a next data unit in a remainder of  
data units of said packet of data to said mobile station from said serving base

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